

# Needle Valves

## Yoke

# Y Series

*Pressures to 50,000 psi (3447 bar)*

Parker Autoclave Engineers' yoke valves are extra heavy-duty, plant grade instrument valves for industrial and severe service applications. Yoke valves feature low closing torque for ease of operation and are designed for use with Parker Autoclave Engineers medium and high pressure tubing and fittings.

### *Yoke Valve Features:*

- Tubing sizes from 9/16" to 1".
- Rising stem/barstock body design.
- Non-rotating stem prevents stem/seat galling.
- Metal-to-metal seating achieves bubble-tight shut-off, longer stem/seat life in abrasive flow, greater durability for repeated on/off cycles and excellent corrosion resistance.
- PTFE encapsulated packing provides dependable stem and body sealing.
- Stem sleeve and packing gland materials have been selected to achieve extended thread cycle life and reduced handle torque.
- Choice of Vee or Regulating stem tips.
- Available in two body patterns.
- Optional materials for cryogenic and other applications.

Parker Autoclave Engineers valves are complemented by a complete line of fittings, tubing, and accessories.



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**Needle Valves - Y Series**  
Yoke

# Valve Series - Y Series

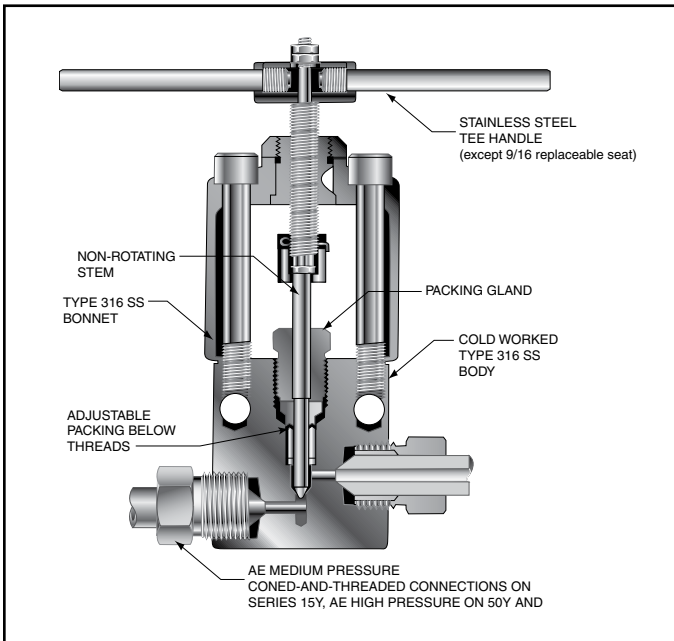
Pressures to 50,000 psi (3447 bar)

Tube Outside Diameter Size Inches	Connection Type	Orifice Size Inches (mm)	Rated $C_V$ *	Pressure psi (bar) @ Room Temperature**
9/16	F562C	0.188 (4.76)	0.66	50,000 (3447)
3/4	SF750CX	0.438 (11.13)	2.41	15,000 (1034)
1	SF1000CX	0.562 (14.27)	3.15	15,000 (1034)
1	F1000C43	0.375 (9.53)	2.3	43,000 (2965)

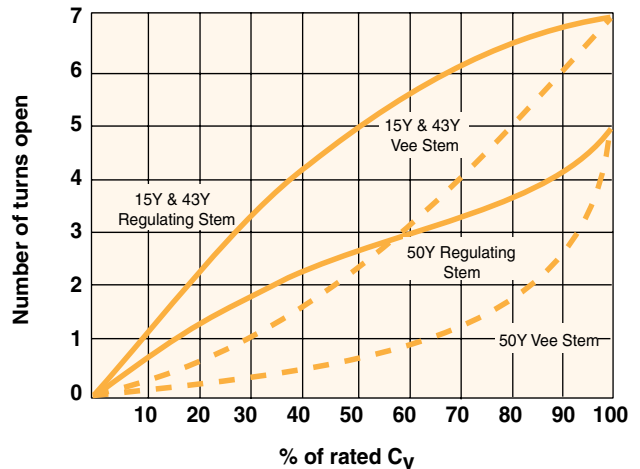
**Notes:**

\*  $C_V$  values shown are for 2-way straight valve pattern. For 2-way angle patterns, increase  $C_V$  value 50%.

\*\* For complete temperature ratings see pressure/temperature rating guide in Technical Information section.



## Generalized Flow Coefficient Curves ( $C_V$ )

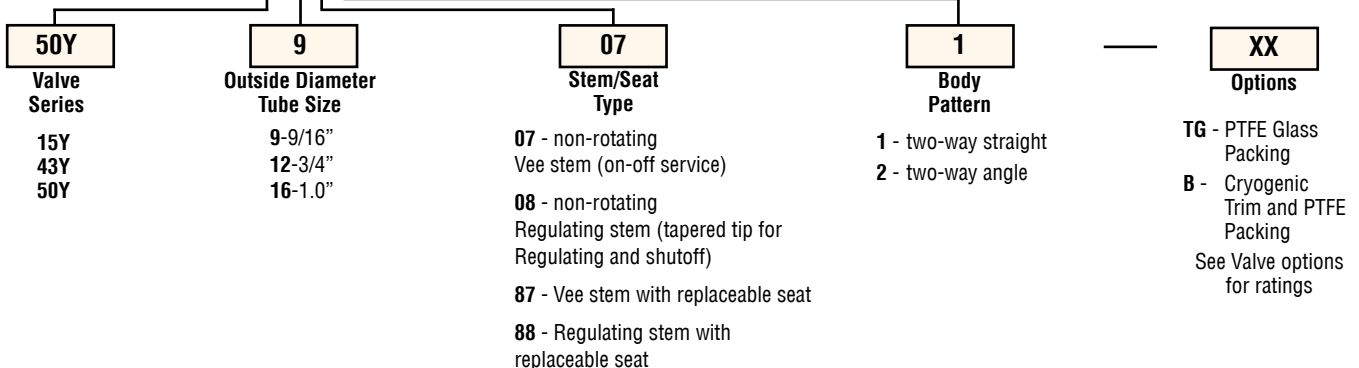


To ensure proper fit use Parker Autoclave Engineers tubing

## Ordering Procedure

For complete information on available stem types, optional connections and additional valve options, see Needle Valve Options section or contact your Sales Representative. The Y Series valves are furnished complete with connection components, unless otherwise specified.

Typical catalog number: **50Y9071**



## Valve Options

### Extreme Temperatures

Standard Parker Autoclave Engineers valves with PTFE packing may be operated to 450°F (232°C). High temperature packing is available for service from 0°F (-17.8°C) to 600°F (316°C) by adding the following suffixes to catalog order number.

**TG** standard valve with PTFE glass packing to 600°F (316°C).

**B** standard valve with cryogenic trim materials and PTFE packing to -100°F (-73°C).

## Valve Maintenance

**Repair Kits:** add "R" to the front of valve catalog number for proper repair kit.  
(Example: **R50Y9071**)

**Valve Bodies:** Valve bodies are available. Order using the eight (8) digit part number found on the valve drawing or contact your Sales Representative for information.

Consult your Parker Autoclave Engineers representative for pricing on repair kits and valve bodies. Refer to the Tools, Installation, Operation and Maintenance section for proper maintenance procedures.

Catalog Number	Stem Type	Outside Diameter Tube	Orifice Diameter	Dimensions - inches (mm)												Block Thickness	Valve Pattern
				A	B	C	D	D <sub>1</sub>	E	F	G	G <sub>1</sub>	H*	M	N		

### 2-Way Straight

15Y12071	VEE	3/4	0.438	3.00	1.50	0.63	.75	1.50	3.50	8.00		0.28	9.38	1.13	0.88	1.38	See Figure 1
15Y12081	REG	(19.05)	(11.13)	(76.20)	(38.10)	(15.88)	(19.05)	(38.10)	(88.90)	(203.20)		(7.11)	(238.25)	(28.58)	(22.23)	(34.93)	
15Y16071	VEE	1.00	0.562	4.13	2.06	0.63	.88	1.88	4.13	10.25		0.28	10.00	1.50	1.13	1.75	
15Y16081	REG	(25.40)	(14.27)	(104.78)	(52.39)	(15.88)	(22.35)	(47.75)	(104.78)	(260.35)		(7.11)	(254.00)	(38.10)	(28.58)	(44.45)	
43Y16071	VEE	1.00	0.375	4.13	2.07	0.72	1.00	1.88	4.13	10.25		0.28	9.56	1.50	1.00	1.75	
43Y16081	REG	(25.40)	(9.53)	(104.90)	(52.45)	(18.29)	(25.40)	(47.75)	(104.78)	(260.35)		(7.11)	(242.82)	(38.10)	(25.40)	(44.45)	
50Y9071	VEE	9/16	0.188	3.00	1.50	0.56	.688	1.25	3.25	13.00		0.50	8.69	1.13	0.88	1.38	
50Y9081	REG	(14.27)	(4.78)	(76.20)	(38.10)	(14.27)	(17.48)	(31.75)	(82.55)	(330.20)		(12.70)	(220.73)	(28.58)	(22.23)	(34.93)	

### 2-Way Angle

15Y12072	VEE	3/4	0.438	3.00	1.50	0.63	1.75		3.75	8.00		0.28	9.63	1.13	0.88	1.38	See Figure 2
15Y12082	REG	(19.05)	(11.13)	(76.20)	(38.10)	(15.88)	(44.45)		(95.25)	(203.20)		(7.11)	(244.48)	(28.58)	(22.23)	(34.93)	
15Y16072	VEE	1.00	0.562	4.13	2.06	0.63	2.25		4.50	10.25		0.28	10.38	1.50	1.13	1.75	
15Y16082	REG	(25.40)	(14.27)	(104.90)	(52.39)	(15.88)	(57.15)		(114.30)	(260.35)		(7.11)	(263.53)	(38.10)	(28.58)	(44.45)	
43Y16072	VEE	1.00	0.375	4.13	2.07	0.72	2.31		4.56	10.25		0.28	10.80	1.50	1.00	1.75	
43Y16082	REG	(25.40)	(9.53)	(104.90)	(52.45)	(18.29)	(58.67)		(115.82)	(260.35)		(7.11)	(274.32)	(38.10)	(25.40)	(44.45)	
50Y9072	VEE	9/16	0.188	3.00	1.50	0.56	1.50		3.50	13.00		0.50	8.81	1.13	0.88	1.38	
50Y9082	REG	(14.27)	(4.78)	(76.20)	(38.10)	(14.27)	(38.10)		(88.90)	(330.20)		(12.70)	(223.82)	(28.58)	(22.23)	(34.93)	

### 2-Way Angle/Replaceable Seat

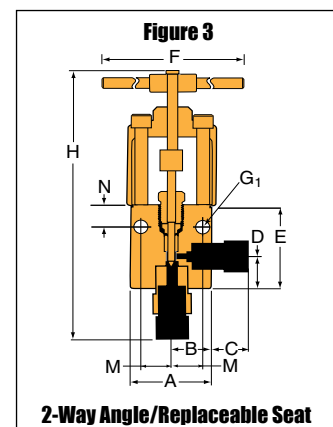
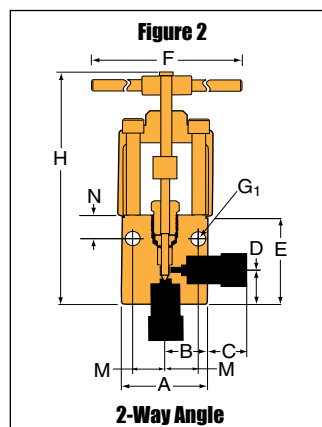
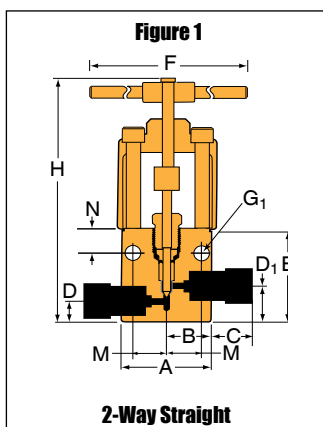
15Y12872	VEE	3/4	0.438	3.00	1.50	0.63	2.06		4.00	8.00		0.28	11.31	1.13	0.88	1.38	See Figure 3
15Y12882	REG	(19.05)	(11.13)	(76.20)	(38.10)	(15.88)	(52.32)		(101.60)	(203.20)		(7.11)	(287.27)	(28.58)	(22.23)	(34.93)	
15Y16872	VEE	1.00	0.562	4.13	2.06	0.63	2.06		4.13	10.25		0.28	11.75	1.50	1.03	1.75	
15Y16882	REG	(25.40)	(14.27)	(104.78)	(52.39)	(15.88)	(52.32)		(104.78)	(260.35)		(7.11)	(298.45)	(38.10)	(26.16)	(44.45)	
43Y16872	VEE	1.00	0.375	4.13	2.07	0.72	2.13		4.38	10.25		0.28	11.95	1.50	1.00	1.75	
43Y16882	REG	(25.40)	(9.53)	(104.78)	(52.45)	(18.29)	(54.10)		(111.25)	(260.35)		(7.11)	(303.53)	(38.10)	(25.40)	(44.45)	
50Y9872	VEE	9/16	0.188	3.00	1.50	0.56	1.38		3.38	4.00		0.28	12.12	1.13	1.06	1.38	
50Y9882	REG	(14.27)	(4.78)	(76.20)	(38.10)	(14.27)	(35.05)		(85.73)	(101.60)		(7.11)	(307.85)	(28.58)	(26.97)	(34.93)	

G - Bracket mounting hole size

All dimensions for reference only and subject to change.

\* H Dimension is with stem in closed position.

For prompt service, Parker Autoclave Engineers stocks select products. Consult factory.



**WARNING**

**FAILURE, IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.**

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**Caution!** Do not mix or interchange parts or tubing with those of other manufacturers. Doing so is unsafe and will void warranty.

**Caution!** Parker Autoclave Engineers Valves, Fittings and Tools are not designed to work with common commercial instrument tubing and will only work with tubing built to Parker Autoclave Engineers AES Specifications. Failure to do so will void warranty.

**ISO-9001 Certified**